



NOTICE OF ALLOWANCE AND FEE(S) DUE

23455 7590 07/28/2009

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EXAMINER
LEE, RIP A
ART UNIT PAPER NUMBER

1796
DATE MAILED: 07/28/2009

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

10/634,351 08/04/2003 Chon Yie Lin 2002B107A 8824

TITLE OF INVENTION: PLASTICIZED POLYOLEFIN COMPOSITIONS

Table with 7 columns: APPLN. TYPE, SMALL ENTITY, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

nonprovisional NO \$1510 \$300 \$0 \$1810 10/28/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.





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EXAMINER: LEE, RIP A
ART UNIT: 1796
PAPER NUMBER: DATE MAILED: 07/28/2009

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**Notice of Allowability**

<b>Application No.</b>	<b>Applicant(s)</b>	
10/634,351	LIN ET AL.	
<b>Examiner</b>	<b>Art Unit</b>	
RIP A. LEE	1796	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1.  This communication is responsive to 08 May 2009.
- 2.  The allowed claim(s) is/are 1,2,4-12,16,17,20,22,24-33,35,57-62,65-70 and 73-85.
- 3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All   b)  Some\*   c)  None   of the:
    - 1.  Certified copies of the priority documents have been received.
    - 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - 3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

- 4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  - 5.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
    - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
- 6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- 1.  Notice of References Cited (PTO-892)
- 2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3.  Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date See Continuation Sheet
- 4.  Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5.  Notice of Informal Patent Application
- 6.  Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_.
- 7.  Examiner's Amendment/Comment
- 8.  Examiner's Statement of Reasons for Allowance
- 9.  Other \_\_\_\_\_.

/David Wu/  
Supervisory Patent Examiner, Art Unit 1796

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 01-16-2009; 05-08-2009.

Art Unit: 1796

**EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Claim 1, line 4	replace "Kinematic" with "kinematic"
Claim 1, line 8	replace "C4 to C20" with "C <sub>4</sub> to C <sub>20</sub> "
Claim 7, line 2	insert "kinematic" prior to "viscosity"
Claim 17, line 4	replace "C6 to C200" with "C <sub>6</sub> to C <sub>200</sub> "
Claim 17, line 5	replace "Kinematic" with "kinematic"
Claim 27, line 2	insert "kinematic" prior to "viscosity"
Claim 33, line 3	replace "Kinematic" with "kinematic"
Claim 59, line 4	replace "Kinematic" with "kinematic"
Claim 62, line 3	replace "Kinematic" with "kinematic"
Claim 65, line 4	replace "Kinematic" with "kinematic"
Claim 66, line 4	replace "Kinematic" with "kinematic"
Claim 67, line 4	replace "Kinematic" with "kinematic"
Claim 68, line 3	replace "Kinematic" with "kinematic"
Claim 69, line 4	replace "Kinematic" with "kinematic"
Claim 70, line 3	replace "Kinematic" with "kinematic"

Art Unit: 1796

- Claim 73, line 4      replace “Kinematic” with “kinematic”
- Claim 74, line 4      replace “Kinematic” with “kinematic”
- Claim 75, line 3      replace “Kinematic” with “kinematic”
- Claim 76, line 3      replace “Kinematic” with “kinematic”
- Claim 77, line 4      replace “Kinematic” with “kinematic”
- Claim 78, line 4      replace “Kinematic” with “kinematic”
- Claim 79, line 3      replace “Kinematic” with “kinematic”
- Claim 80, line 4      replace “Kinematic” with “kinematic”
- Claim 81, line 3      replace “Kinematic” with “kinematic”
- Claim 82, line 4      replace “Kinematic” with “kinematic”
- Claim 83, line 4      replace “Kinematic” with “kinematic”
- Claim 84, line 4      replace “Kinematic” with “kinematic”
- Claim 85, line 4      replace “Kinematic” with “kinematic”

Art Unit: 1796

*Allowable Subject Matter*

The following is an examiner's statement of reasons for allowance: Claims 1, 2, 4-12, 16, 17, 20, 22, 24-33, 35, 57-62, 65-70, and 73-85 are allowed.

The present invention is drawn to a plasticized polyolefin composition comprising polyolefin and non-functionalized plasticizer wherein the non-functionalized plasticizer comprises C<sub>6</sub> to C<sub>200</sub> paraffins having a pour point of less than -30 °C and a kinematic viscosity of from 10 cSt to 500 cSt at 100 °C and wherein elastomers are substantially absent from the composition. See claims for full details.

In one embodiment (claims 1, 2, 4-12, 16, 20, 57 and 58), the polyolefin is a propylene homopolymer or propylene copolymer having up to 0.1 to 30 wt % of co-monomer selected from the group consisting of ethylene and C<sub>4</sub> to C<sub>20</sub> alpha-olefins, said propylene homopolymer or propylene copolymer having a melt flow rate of from 0.1 to 2500 dg/min, and polyethylene homopolymer and copolymer having  $M_w$  of from 500 to 10,000 is substantially absent from the composition.

In another embodiment (claims 17, 22, 24-32, 35, 60, and 61), the polyolefin is a propylene impact copolymer comprising 40 % to 95 % by weight of a component A and from 5 % to 60 % by weight of a component B.

In another embodiment (claim 33), the polyolefin is selected from propylene homopolymers, propylene copolymers, propylene impact copolymers that are reactor blends, said polyolefin having a melt flow rate of from 0.1 to 2500 dg/min, and polyethylene homopolymer and copolymer having  $M_w$  of from 500 to 10,000 is substantially absent from the composition.

In another embodiment (claims 65-85), the plasticized polyolefin composition further comprises specified elastomer or metallocene catalyzed copolymer of ethylene and 1-butene, 1-hexene, or 1-octene.

Another aspect of the invention (claims 59 and 62) is drawn to a plasticized polyolefin composition comprising polyolefin and non-functionalized plasticizer wherein the non-functionalized plasticizer comprises C<sub>6</sub> to C<sub>200</sub> paraffins having a pour point of less than -60 °C



Art Unit: 1796

and a kinematic viscosity of from 10 cSt to 500 cSt at 100 °C and wherein elastomers are substantially absent from the composition.

Relevant references cited in prosecution include:

Iwasaki *et al.* (U.S. 5,240,966) teaches preparation of granular colorant by adsorption of 150 g of Lucant HC-10 hydrocarbon (blend of C<sub>10</sub> oligomer and C<sub>2</sub>/α-olefin liquid, KV<sub>100</sub> = 10, pour point = -50 °C), 500 g of spherical porous polypropylene (MI = 30 g/10 min), and colorant, followed by lyophilization to remove volatiles. In this case, Lucant HC-10 would be removed. Furthermore, claims preclude presence of ethylene copolymer having M<sub>w</sub> of from 500 to 10,000. It is maintained that the person of ordinary skill in the art would not have found it obvious to stop the process shown in Iwasaki *et al.* at an intermediate stage in order to isolate spherical polypropylene particles having hydrocarbon adsorbed thereon. Therefore, it is deemed that the claimed invention is patentably distinct over the disclosure of Iwasaki *et al.*

Sasaki *et al.* (JP 11-49903) discloses a polyethylene resin (containing propylene comonomer) comprising paraffinic oil having a kinematic viscosity of 20-800 cSt at 40 °C and a pour point of -40 to 0 °C. The paraffinic oil used in the invention is Diana PW-90 and Diana PW-380, both of which have pour points of -15 °C. The reference does not disclose use of the claimed polypropylene resin. In view of exemplified paraffinic oils, it is maintained that one having ordinary skill in the art would not have found it obvious, based on the general ranges of kinematic viscosity and pour point cited in the patent, to make the claimed composition having non-functionalized plasticizer with a pour point of less than -30 °C and a kinematic viscosity of from 10 cSt to 500 cSt at 100 °C. Therefore, it is concluded that the claimed invention is patentably distinct over the invention of Sasaki *et al.*

Suokas *et al.* (WO 98/44041) discloses a melt blend of a polyolefin matrix and liquid polyalphaolefin plasticizer comprised of oligomers of C<sub>6</sub>-C<sub>12</sub> alpha olefins. Exemplary plasticizers are commercially available as Nexbase 2004 (KV<sub>100</sub> = 3.8-4.1 cSt, pour point = -69 °C) and Nexbase 2008 (KV<sub>100</sub> = 7.9 cSt, pour point = -60 °C). Non-functionalized plasticizers of the prior art do not exhibit the claimed properties.

Art Unit: 1796

Tabata *et al.* (JP 9-208761) teaches a composition comprising 100 parts by weight of a propylene based block copolymer (1-40 wt % propylene homopolymer and 60-99 wt % propylene-ethylene random copolymer components), 40-150 parts by weight of plasticizer, and 20-100 parts by weight of ethylene/ $\alpha$ -olefin plastomer containing 2-15 mole % of a C<sub>4+</sub> alpha olefin comonomer. A useful plasticizer is Lucant HC-40 (ethylene/ $\alpha$ -olefin copolymer, pour point = -40 °C, KV<sub>100</sub> = 40 cSt,  $M_w$  = 1545). Claims preclude presence of ethylene copolymer having  $M_w$  of from 500 to 10,0000.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Information Disclosure Statement***

References designated AD, AK, AN, and AU in the information disclosure statement filed on January 16, 2009 were not considered as they relate to subject matter not germane to the instant invention.

Art Unit: 1796

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

/Rip A. Lee/  
Examiner, Art Unit 1796

July 21, 2009

/David Wu/  
Supervisory Patent Examiner, Art Unit 1796